

REMARKS

This amendment responds to the office action dated December 28, 2005.

The Examiner objected to claims 17-22 for certain informalities. Claims 17-22 have been canceled.

The Examiner rejected claims 18, 21, and 22 under 35 U.S.C. § 112, second paragraph. The Examiner rejected claims 17, 19, and 21 under 35 U.S.C. § 102(e) as being anticipated by Harada, U.S. Patent No. 6,115,435. The Examiner rejected claims 18 and 22 under 35 U.S.C. § 103(a) as being obvious in view of the combination of Harada with Viterbi. Though the Examiner did not explain the rejection of claim 20, the applicant presumes that the rejection was an obviousness rejection under § 103(a) given Viterbi's reference to a log likelihood ratio in Section III beginning at p. 561. Each rejected claim has been canceled.

New claim 26 includes the limitation of "comparing respective measures of reliability of at least two bits of said constellation vector of said demodulated multilevel signal, said respective measures of reliability being log likelihood ratios and being limited to a predetermined range." This limitation is neither found expressly in either of, nor suggested by the combination of, Harada and Viterbi. As noted by the Examiner, Harada discloses a method of demodulating QAM signals where soft and hard decision values, each ranging from 0 to 7, are assigned to decoded bits. The Examiner contends that these respective bit values of 0 to 7 represent "measures of reliability", and that ranges of these measures of reliability are therefore also limited to the range of 0 to 7. However, these soft and hard decision values are not the claimed "log likelihood ratio." Furthermore, to the extent that Viterbi discloses a method that uses a log likelihood ratio, were such a ratio to be used in the method of Harada, there would be no suggestion to limit *the log likelihood ratio* to a predetermined range, as claimed.

New claim 27 depends from claim 26 and includes the additional limitation of "each of said respective log likelihood ratios is limited to a range of values less than the possible number of bits that could be assigned soft values." This additional limitation is not suggested by either Harada or Viterbi.

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Reply to Office action of December 28

New claim 28 depends from claim 26 and includes the additional limitation of "where said predetermined range is calculated using a simulation of said method on a communication system." This additional limitation is not suggested by either Harada or Viterbi. (The applicant notes that the Examiner's reasoning is that the limitation on the range of values for the soft/hard decisions being 0 to 7 is inherent, and requires no simulation).

In view of the foregoing amendments and remarks, the applicant respectfully requests reconsideration and allowance of claims 26-28.

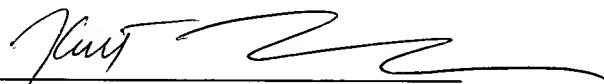
Respectfully submitted,



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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment; Commissioner for Patents; P.O. Box 1450; Alexandria, VA 22313-1450



Dated: June 28, 2005

Kurt Rohlfs